

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
7 December 2000 (07.12.2000)

PCT

(10) International Publication Number
WO 00/73828 A1

(51) International Patent Classification: G02B 6/132

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(21) International Application Number: PCT/GB00/02028

(22) International Filing Date: 26 May 2000 (26.05.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
9912737.5 1 June 1999 (01.06.1999) GB(71) Applicant (for all designated States except US):
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(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

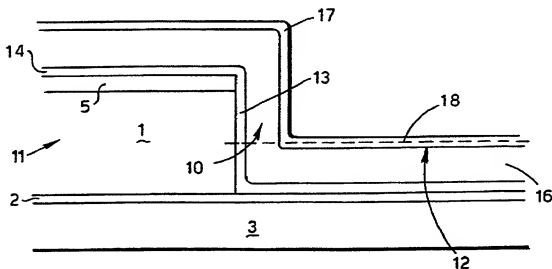
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

— With international search report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: WAVEGUIDE JUNCTION WITH SILICON NITRIDE



(57) Abstract: A junction structure between a semiconductor waveguide region and a first dielectric forming a further waveguide region of lower refractive index than the semiconductor waveguide region. The structure includes a light transmitting semiconductor layer which has an end face at the junction and a substrate below the semiconductor layer which extends beyond the junction and a first dielectric light transmitting layer formed over the extending part of the substrate and extending in alignment with the semiconductor layer to provide the further waveguide region. A second dielectric layer of refractive index below that of the two waveguide regions is formed over the end face of the semiconductor and over the extending part of the substrate. In this way a support layer is formed having a required thickness for the further waveguide region to provide the required alignment of the optical access through the two waveguide regions.

WO 00/73828 A1